Ref. 2

COMMUNICATION SYSTEM AND COMMUNICATION TERMINAL EQUIPMENT

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Abstract of **JP 11191800 (A)**

PROBLEM TO BE SOLVED: To make it possible to surely and quickly contact a user of a call destination by one dialing or by one entry of a number even in the case that the user of the call destination has pluralities of terminals. SOLUTION: In the case of detecting dialing from a caller transmission 1 to a terminal 3a, a 1st network informs a terminal management server 2 of a telephone number of a call destination. When the terminal management server 2 recognizes it that the user of the terminal of the call destination is Mr. A and only terminals 3b, 3c among terminals used by Mr. A are available of call reception, the server 2 informs the 1st network of the telephone number of the terminal 3b among the call reception available terminal.; Upon the receipt of the telephone number assigned to the terminal 3b, the 1st network gives the number to a 2nd network to request call processing of the call. The 2nd network calls the terminal 3b.
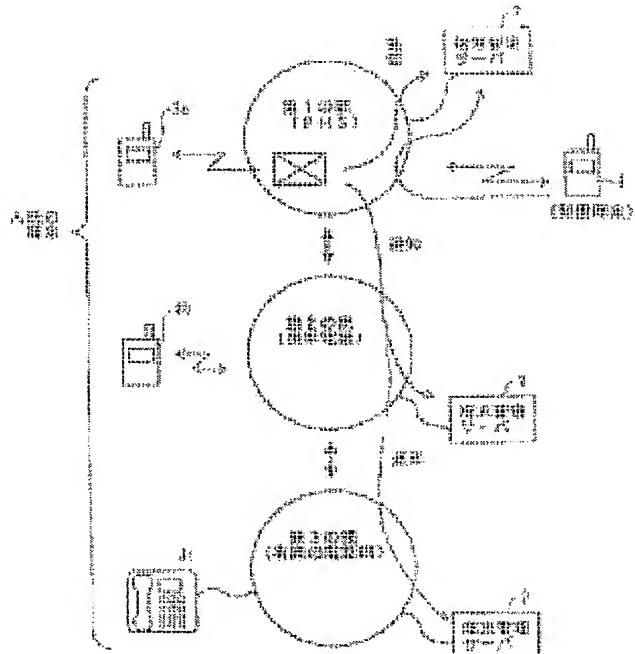
* NOTICES *

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1.This document has been translated by computer. So the translation may not
reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1]A communications system which connects a master station and a
called terminal using at least one in two or more public networks characterized
by comprising the following.
A storing means which stores information showing whether it is in a state
where an identification number of two or more communication terminals which
the member uses, and a communication terminal of these plurality can receive
a message for every member.
An acquisition means which acquires an identification number of a
communication terminal which should receive a message with reference to the
above-mentioned storing means when call origination is detected, and a call
means to call the communication terminal via a public network with which a
communication terminal corresponding to an identification number which the
above-mentioned acquisition means acquired is accommodated.

[Claim 2]The communications system according to claim 1 which acquires an
identification number of a communication terminal in which the highest
priority in a communication terminal in the state where the above-mentioned
storing means stores information showing a priority between communication
terminals of further the above-mentioned plurality, and the above-mentioned
acquisition can receive a message is set up.
[Claim 3]A communication terminal device comprising:
A storing means which stores information which expresses a priority between
an identification number of two or more communication terminals which the
telephone call schedule person uses, and a communication terminal of these
plurality for every telephone call schedule person.
A specifying means which specifies a telephone call schedule person who uses
a communication terminal corresponding to the detected identification number
with reference to the above-mentioned storing means when an identification
number which specifies a mail arrival place is detected.
An acquisition means which acquires an identification number of a
communication terminal in which the highest priority in a communication

terminal which a telephone call schedule person specified by the above-mentioned specifying means uses is set up.
A calling means which carries out call origination using an identification number which the above-mentioned acquisition means acquired.

[Claim 4]The communication terminal device according to claim 3 which acquires an identification number which the above-mentioned acquisition means used in the call origination, and a different identification number and in which the above-mentioned calling means carries out a recurrence call using the newly acquired identification number when a call corresponding to the above-mentioned call origination is not able to be established.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the system supposing the case
where the user of a mail arrival place has two or more terminals especially, with
respect to a communications system and a communication terminal device.
[0002]
[Description of the Prior Art]The situation of using two or more communication
terminals by oneself is increasing with development of an information society.
For example, while it has the telephone of the existing cable at a house, when
going out, those who walk around with a personal digital assistant, a PHS
terminal, a pager terminal (pager), etc. are increasing in number.
[0003]It is ****** about the telephone number currently assigned to one in the
communication terminal which imagines the call partner's situation, action,
etc. and the call partner usually uses when it is going to telephone to the user
who uses two or more communication terminals. For example, what the
number of a personal digital assistant is supplied if it is daytime, and supplies
the number of the telephone of a cable to night is performed.
[0004]However, the partner cannot be contacted when the power supply of the
case where the partner was absent or communication terminals, such as a
cellular phone or PHS, are located outside call area, or its communication
terminal is an OFF state, even if it tries a telephone call as mentioned above. In
such a case, the telephone number of other communication terminals which
the above-mentioned partner uses was usually switched on anew.
[0005]However, the futility of time does in this way, and switches on two or
more telephone numbers, and the opinion that it is troublesome using two or
more telephone numbers properly is often heard. It was also troublesome to
have memorized two or more telephone numbers for every partner who wants
to talk over the telephone.
[0006]"Call transmission" is known as one of the supplementary services which
a communication enterprise provides. A net calls the terminal of a mail arrival
place, and a call call forwarding service transmits the call to other terminals set
up beforehand, for example, when there is no response to it, or when it is under
telephone call. However, in the existing call call forwarding service, since
processing which actually calls a terminal from a net was usually performed,

before a call was transmitted, it would often take long time.

[0007]The technical problem of this invention is solving an above-mentioned problem.

in the case where the user of a mail arrival place has two or more terminals -- one-time dispatch -- or it is providing the communications system and communication terminal device which enabled it to contact the user certainly and promptly by number injection once.

[0008]

[Means for Solving the Problem]A communications system of this invention is the composition of connecting a master station and a called terminal using at least one in two or more public networks, A storing means which stores information showing whether it is in a state where an identification number of two or more communication terminals which the member uses, and a communication terminal of these plurality can receive a message for every member, When call origination is detected, it has an acquisition means which acquires an identification number of a communication terminal which should receive a message with reference to the above-mentioned storing means, and a call means to call the communication terminal via a public network with which a communication terminal corresponding to an identification number which the above-mentioned acquisition means acquired is accommodated.

[0009]If an identification number which specifies a communication terminal of a mail arrival place is supplied according to the above-mentioned composition, what can receive a message in two or more communication terminals which a member who uses a communication terminal of ****** is specified, then the specified member uses will be detected by referring to a storing means. And one in a communication terminal in which the arrival is possible is called.

Therefore, an addresser only performs a number injection once, and the public network can contact a member of a mail arrival place certainly only by performing call processing once.

[0010]A communication terminal device of this invention is provided with the following.

A storing means which stores information which expresses a priority between an identification number of two or more communication terminals which the telephone call schedule person uses, and a communication terminal of these plurality for every telephone call schedule person.

A specifying means which specifies a telephone call schedule person who uses a communication terminal corresponding to the detected identification number with reference to the above-mentioned storing means when an identification number which specifies a mail arrival place is detected.

An acquisition means which acquires an identification number of a communication terminal in which the highest priority in a communication terminal which a telephone call schedule person specified by the above-mentioned specifying means uses is set up.

A calling means which carries out call origination using an identification number which the above-mentioned acquisition means acquired.

[0011]In the above-mentioned composition, a telephone call schedule person can be specified from an identification number of a supplied mail arrival place, a high communication terminal of a possibility that it is most connectable in two or more communication terminals which the telephone call schedule person has can be chosen, and call origination can be carried out to the communication terminal.

[0012]

[Embodiment of the Invention]A 1st embodiment [1st] of an embodiment realizes call connection processing of this invention as service which a net (communication enterprise) provides.

[0013]Drawing 1 is a lineblock diagram of the communications system of a 1st embodiment. Here, a PHS network, a portable telephone network, and a wire telephone network are assumed as the 1st - the 3rd public network, respectively. Let the 1st - the 3rd public network of each other be what can communicate. That is, for example, it is considered as the thing in which the telephone call between the terminal accommodated in the 1st public network and the terminal accommodated in the 2nd or 3rd public network is possible.

[0014]Although the master station 1 assumes here the terminal (PHS terminal) accommodated in the 1st public network, it may be a communication apparatus accommodated in other public networks. The master station 1 is a terminal used when telephoning Mr. A in this example.

[0015]The terminal management server 2 is an information processor which manages the state of each terminal accommodated in the 1st - the 3rd public network. As a state of each terminal, it is managed at least whether the terminal is in the state where a message can be received in a call. In drawing 1, although the terminal management server is formed for every public network, it may be the composition of forming one terminal management server shared by the 1st - the 3rd public network.

[0016]The terminals 3a-3c are terminal units which Mr. A uses altogether. The terminal unit with which the terminal 3a is accommodated in the 1st public network (PHS network), the terminal unit with which the terminal 3b is accommodated in the 2nd public network (portable telephone network), and the terminal 3c are terminal units accommodated in the 3rd public network (telephone network with which communication is performed with a cable). Mr. A uses these terminals 3a-3c properly according to the time zone or the place. A telephone number (identification number) mutually different, respectively is assigned to the terminals 3a-3c.

[0017]In the system of the above-mentioned composition, in taking contact with Mr. A using the master station 1, it supplies any one in the telephone number currently assigned to the terminals 3a-3c, respectively. If this number injection is detected, call origination of the master station 1 will be carried out to the 1st net. The 1st net will notify the telephone number of a mail arrival place to the terminal management server 2, if this call origination is detected. The terminal management server 2 specifies the user who uses the terminal to which the notified number is assigned, extracts one thing in the state where a message can actually be received in two or more terminals which the user uses, and notifies the number to the 1st net. And the 1st net calls a terminal using

the number notified from the terminal management server 2.

[0018]An example is shown. Here it shall be in the state where the terminal 3a cannot receive a message, and shall be in the state where the terminals 3b and 3c can receive a message. As a state where a message cannot be received, the case where the power supply of the mobile terminal is turned off, the case where the terminal is not located in a communications area, etc. are assumed, for example. The terminal management server 2 recognizes the state of each terminals 3a-3c.

[0019]In the above-mentioned state, if the telephone number of the terminal 3a is switched on using the master station 1, the 1st net will notify the number to the terminal management server 2. The terminal management server 2 will recognize that the user of a mail arrival place is Mr. A, and that it is in the state where only the terminals 3b and 3c can receive a message in the terminal which Mr. A uses, if the number is received. And the terminal management server 2 notifies one telephone number of the two terminals in the state in which these arrival is possible to the 1st net. Here, the telephone number of the terminal 3b should be notified. If the telephone number currently assigned to the terminal 3b is received, the 1st net will pass the number to the 2nd net, and will request call processing. And the 2nd net calls the terminal 3b.

[0020]Hereafter, a 1st embodiment is described in detail. Drawing 2 is a lineblock diagram of the subscriber data stored in the terminal management server 2. The connection destination directions information that the terminal called when the telephone number of one or more terminals which each member uses, the information (flag) showing whether it is in the state where those terminals can receive a message, and the receipt to the member occur is specified as a subscriber data is stored. In the example shown in drawing 2, for example as information about the Ito O man (Mr. A of drawing 1), (1) The contract which uses the terminal (terminals 3a-3c of drawing 1) accommodated in the 1st - the 3rd public network, respectively is carried out, (2) Be in the state where the terminals 3b and 3c can receive a message, among these three terminals now, and it is (3). When the receipt to him occurs, the information which shows ** which calls the terminal 3b is registered. The above-mentioned subscriber data is immediately updated, when interrupt processing from which the state of each terminal changed and which gives the time and the below-mentioned explanation is started.

[0021]Drawing 3 is a flow chart explaining the processing which updates the subscriber data shown in drawing 2. This processing is performed in the terminal management server 2, when the state of the terminal accommodated in either the 1st - the 3rd public network changes, or when the interrupt based on priority information occurs.

[0022]Each mobile terminal will notify the position of the terminal to a net, if a power supply is switched on. A net continues recognizing the position of the terminal, as long as the power supply of the terminal is an ON state and the terminal exists in the communications area of the net henceforth. Therefore, it can consider that the period when the net recognizes the position of a terminal is in the state where the terminal can receive a message. The above-mentioned function is realized in the existing system (called a home memory office).

[0023]This embodiment uses this function, and each public network notifies that to the terminal management server 2, when the terminal accommodated in that public network newly changes into the state where a message can be received, and when it changes into the state for which a message cannot be received. As shown in drawing 1, when two or more terminal management servers 2 exist, a net notifies that to each terminal management server. It is considered that each terminal is in the state where a message can always be received, fundamentally in the case of a wire telephone machine.

[0024]In Step S1, it is investigated whether it is the notice which tells that the terminal was newly turned on (it includes having entered in the communications area). If it is the notice which tells that the terminal was newly turned on, in Step S2, "1 (O seal among a figure)" will be set as the status flags corresponding to the terminal, otherwise, it will progress to Step S3. In Step S3, it is investigated whether it is the notice which tells that a certain terminal was turned off (stopping existing in a communications area is included). If it is the notice which tells that a certain terminal was turned off, in step S4, "0 (x seal among a figure)" will be set as the status flags corresponding to the terminal, otherwise, it will progress to Step S5. In Step S5, it is investigated whether the interrupt based on priority information occurred. It explains referring to drawing 4 for interruption based on priority information here.

[0025]According to this embodiment, each member can specify the priority of a called terminal according to a time zone or a day of the week. This priority information is stored in the terminal management server 2. In the example shown in drawing 4, to the arrival to the Ito O man, 9:00-17:00 have the highest priority of the terminal 3a, and the priority is set up in order of the terminal 3b and the terminal 3c below. 17:00-21:00 have the highest priority of the terminal 3b, a priority is set up in order of the terminal 3a and the terminal 3c below, 21:00-9:00 have the highest priority of the terminal 3c, and the priority is set up in order of the terminal 3a and the terminal 3b below.

[0026]Interruption based on a priority is generated to the timing from which the priority between the terminal 3a - 3c changes. In the case of an above-mentioned example, it will generate in 9:00, 17:00, and 21:00, respectively.

[0027]It returns to a flow chart. In Step S5, if the interrupt based on priority information occurred, it will progress to Step S11, otherwise, other processings will be performed in Step S21.

[0028]In Step S11, the user of a terminal notified of having been turned on, the user of a terminal notified of having been turned off, or the member corresponding to generated interruption is recognized. And with reference to the priority information shown in drawing 4, the terminal in which the highest priority in the terminal which the member (user) uses is set up is extracted. In Step S12, it is investigated whether the terminal extracted at Step S11 is an ON state. If it is an ON state, it will progress to Step S14, and if it is not an ON state, the terminal in which the high priority is set as the next of the terminal extracted by SU and the tetraethylpyrophosphate S11 in Step S13 will be extracted, and it will return to Step S12. That is, the terminal in which the highest priority in the terminal which is an ON state is set up is extracted by

processing of Steps S11-S13. And in Step S14, the information which identifies the terminal extracted by processing of Steps S11-S13 as connection destination directions information is written in.

[0029]By the above-mentioned processing, the terminal to which the highest priority in the terminal in the state where a message can be received is assigned will be chosen and set up for every member. And this connection destination specification information is immediately updated, whenever the state of a terminal changes, and whenever a priority changes.

[0030]Drawing 5 is a flow chart explaining a call origination sequence. Here, when either the 1st or - the 3rd public network detects call origination, the processing which the terminal management server which the processing which the public network performs, and its public network access performs is explained. Specifically, processing of a public network is processing of a switchboard, for example.

[0031]If call origination is detected in Step S31, in Step S32, it will be investigated whether it is contracting for the member who uses the terminal of the mail arrival place of the call receiving call connection service (automatic routing service) of this embodiment. That is, service of this embodiment is provided as option service. Therefore, when the member concerned has not made a contract of this service, the usual call processing is performed in Step S33. On the other hand, if the contract is carried out, in Step S34, the telephone number of the mail arrival place specified in the call origination detected at Step S31 will be transmitted to a terminal management server, and processing will be requested. Henceforth, this public network goes into the state of waiting for the response from the terminal management server 2.

[0032]Judgment of Step S32 may be the composition that a special program is detected. That is, when it is going to receive service of this embodiment, it may be the composition for which an addresser supplies a special program (number beforehand decided on for telling starting this service to a net).

[0033]Steps S41 and S42 are processings of the terminal management server 2. In Step S41, a member table is accessed by using as a key the telephone number which received from the public network, and the member who uses the terminal to which the telephone number is assigned is specified. And the connection destination directions information set up to the specified member is detected. In Step S42, the telephone number of the terminal specified using the connection destination directions information detected at Step S41 is extracted, and the telephone number is returned to a public network.

[0034]In Step S35, a public network will establish a call based on the telephone number, if the telephone number as search results by the terminal management server 2 is received. That is, the terminal to which the telephone number received from the terminal management server is assigned is called. At this time, connection processing is requested from other public networks if needed.

[0035]Thus, if the system of a 1st embodiment is used, even if it will be a case where the call partner has two or more terminals, the addresser can contact the partner certainly only by switching on the telephone number of one terminal of them. As shown in the above-mentioned example, when the telephone number

of the terminal in the state where a message cannot be received in two or more terminals which a call partner has is switched on, a net chooses the terminal in the state where a message can be received in two or more terminals which the call partner has, and receives a message to the terminal. It can be recognized whether it is in the state where that terminal that should receive a message can receive a message, without actually calling the terminal in which the net should receive a message at this time. For this reason, useless call processing becomes unnecessary and the time for establishing a call is saved.

[0036]Since a 1st embodiment is realized as service which a net provides, each terminal can use the existing thing as it is.

A 2nd embodiment [2nd] of an embodiment realizes call connection processing of this invention as a function which a terminal unit has.

[0037]Drawing 6 is a block diagram of the terminal unit of a 2nd embodiment. Here, although explained as a mobile telecom terminal, this invention is applicable also to the terminal unit of a cable.

[0038]The terminal unit (the following, terminal unit 10) of this embodiment is provided with the voice input/output device 13 which processes the voice data outputted to the voice data and the loudspeaker 12 which were inputted from the loudspeaker 12 for outputting the microphone 11 for making a user input a sound, and a sound, and the microphone 11. The input device 14 is a push button etc. and makes a user input the telephone number of a mail arrival place, and other directions. The display 15 is a liquid crystal display, for example, and displays the information concerning the notice of there having been contents inputted via the input device 14 and arrival, and other communications.

[0039]The memory storage 21 stores the program which described the software function which this terminal unit 10 has, the data given fixed, etc. The storage 22 is removable memory storage and stores the program which described the software function which this terminal unit 10 has like the memory storage 21, fixed data, etc. CPU23 executes the program stored in the memory storage 21 or the storage 22, using the predetermined region of RAM24. The radio communication equipment 25 transmits and receives data (control data and voice data are included) via a communication line according to directions of CPU23. The radio communication equipment 25 may be composition provided with two or more communication units respectively connectable with two or more public networks. GPS device 26 detects the position of this terminal unit 10, receiving the signal from an artificial satellite.

[0040]Drawing 7 is a lineblock diagram of an example of the dispatch management table registered into the terminal unit 10. The telephone number of the terminal which that telephone call schedule person uses for every telephone call schedule person (existing partner to whom the user of this terminal unit 10 is going to telephone) is registered into this dispatch management table. A user registers each telephone number fundamentally. Connection destination directions information is information which specifies the terminal (telephone number) used when sending from this terminal unit 10 a little unlike the information explained by a 1st embodiment. This connection destination specification information is automatically updated according to a

day of the week and a time zone, for example. This dispatch management table is stored in the nonvolatile memory area of RAM24, for example.

[0041]Drawing 8 is a flow chart explaining processing of the terminal terminal 10 at the time of dispatch. This processing is performed when a user switches on the telephone number of a mail arrival place. The telephone number switched on by the user is detected in Step S51. In Step S52, the dispatch management table shown in drawing 7 by using the detected telephone number as a key is searched. In Step S53, it is investigated whether the telephone number which detected [above-mentioned] is registered into the dispatch management table. When registered, in Step S54, the user of the terminal to which the telephone number is assigned with the dispatch management table is specified. Then, in Step S55, the telephone number of the terminal directed using connection destination directions information is extracted out of two or more terminals which the user who specified at Step S54 uses. And in Step S56, call origination is carried out using the telephone number extracted at Step S55. On the other hand, when the telephone number switched on by the user is not registered into a dispatch management table, call origination is carried out in Step S57, using the supplied number as it is.

[0042]Thus, if any one telephone number in two or more terminals which a certain telephone call schedule person uses is switched on in a 2nd embodiment, The terminal unit itself specifies a telephone call schedule person based on the telephone number, it chooses one of predetermined [the / in the terminal of two or more terminals which the telephone call schedule person who specified uses further], and carries out call origination to the selected terminal.

[0043]Drawing 9 is a flow chart of recurrence call processing when a call is not able to be established. This processing is performed when call origination is carried out by processing of the flow chart shown in drawing 8, and it is reported from a net that the call corresponding to that call origination was not able to be established (or even if predetermined time passes after carrying out call origination, when there is no response in any way from a net). As a situation where a call is unestablishable, when the power supply of the terminal of a mail arrival place is an OFF state, the case where the terminal of a mail arrival place is located outside a communications area etc. are assumed.

[0044]If the notice of a purport which was not able to establish a call is received from a net, in Step S61, the terminal unit 10 will search a dispatch management table, and will choose other telephone numbers which are not used in previous call origination. In Step S62, connection destination directions information is updated so that the terminal corresponding to the telephone number selected at Step S61 may be specified. And in Step S63, a recurrence call is carried out using the telephone number selected at Step S61. According to a 2nd embodiment, recurrence call processing shown in drawing 9 is repeated until it can contact a telephone call schedule person.

[0045]In the example shown in drawing 9, when it sends to a certain telephone call schedule person by updating connection destination directions information in Step S62, the terminal connected last time in two or more terminals which the telephone call schedule person uses is chosen automatically, and call

origination is carried out to the terminal. it is expected that a possibility that the partner of a mail arrival place can be contacted by the 1st call origination without carrying out a recurrence call namely, -- will increase by this. When updating connection destination directions information according to a day of the week and a time zone, processing of Step S62 is skipped.

[0046]According to a 2nd embodiment of the above, a telephone call schedule person can be contacted certainly, without changing the composition of the existing public network.

[0047]

[Effect of the Invention]in the case where the user of a mail arrival place has two or more terminals according to this invention -- one-time dispatch -- or the user can be once contacted now certainly and promptly by number injection. In particular, according to a 1st embodiment, since it can be recognized whether a net is in the state where the terminal which should receive a message can receive a message, without actually calling the terminal which should receive a message, useless call processing becomes unnecessary and the time for establishing a call is saved. According to a 2nd embodiment, a telephone call schedule person can be contacted certainly, without changing the existing net.

[Translation done.]

第1の実施形態の通信システムの構成図
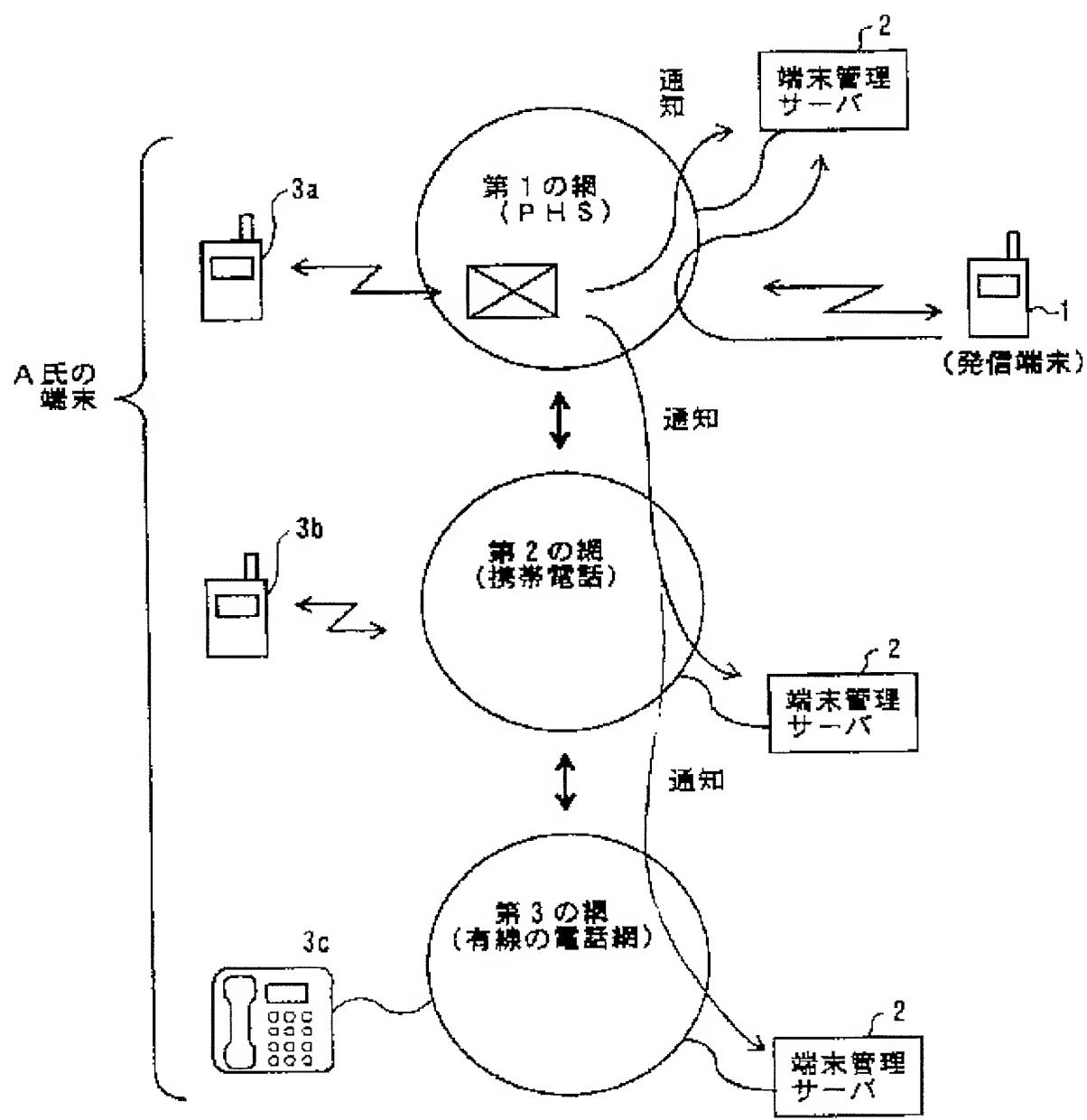
Fig 1

第1の実施形態の通信システムの構成図
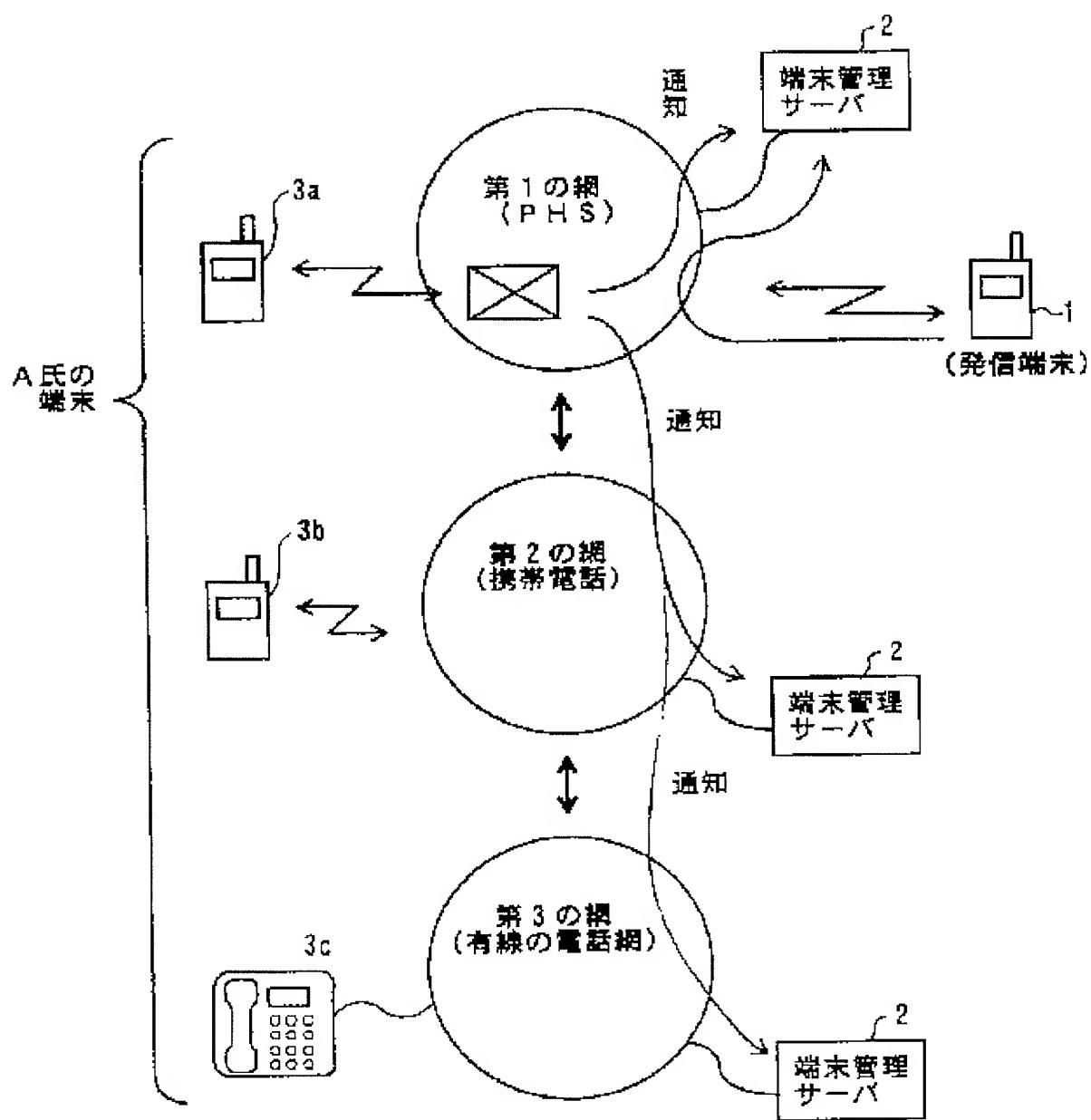
Fig 2

端末管理サーバに格納される加入者データの構成図


```
        ┌─────────────┐
        │   スタート   │
        └─────────────┘
               │
  S1    ◇───────────────◇      No
        「端末ON」を受信  ───────────┐
        ◇───────────────◇          │
               │ Yes          S3   ◇───────────────◇      No
  S2    ┌─────────────┐         「端末OFF」を受信  ───────────┐
        │その端末の状態を│         ◇───────────────◇          │
        │ON（○）にする │               │ Yes          S5  ◇───────────────◇   No
        └─────────────┘         S4  ┌─────────────┐        優先度          ───────┐
               │                   │その端末の状態を│     情報に基づいた割込み？        │
               │                   │OFF（×）にする│        ◇───────────────◇       │
  S11          │                   └─────────────┘              │ Yes            │
        ┌─────────────┐                 │                                  S21 ┌──────────┐
        │もっとも優先度の│                                                      │ 他の処理 │
        │高い端末を抽出 │                                                      └──────────┘
        └─────────────┘
               │
  S12   ◇───────────────◇      No
        抽出した端末はON  ───────────┐
        状態？                     │
        ◇───────────────◇      S13 │
               │ Yes          ┌─────────────┐
  S14   ┌─────────────┐       │次に優先度の高い│
        │その端末を指定する│     │端末を抽出   │
        │番号を接続先指示情│     └─────────────┘
        │報として設定   │
        └─────────────┘
               │
        ┌─────────────┐
        │    終　了    │
        └─────────────┘
```

Fig 3

- 14 -
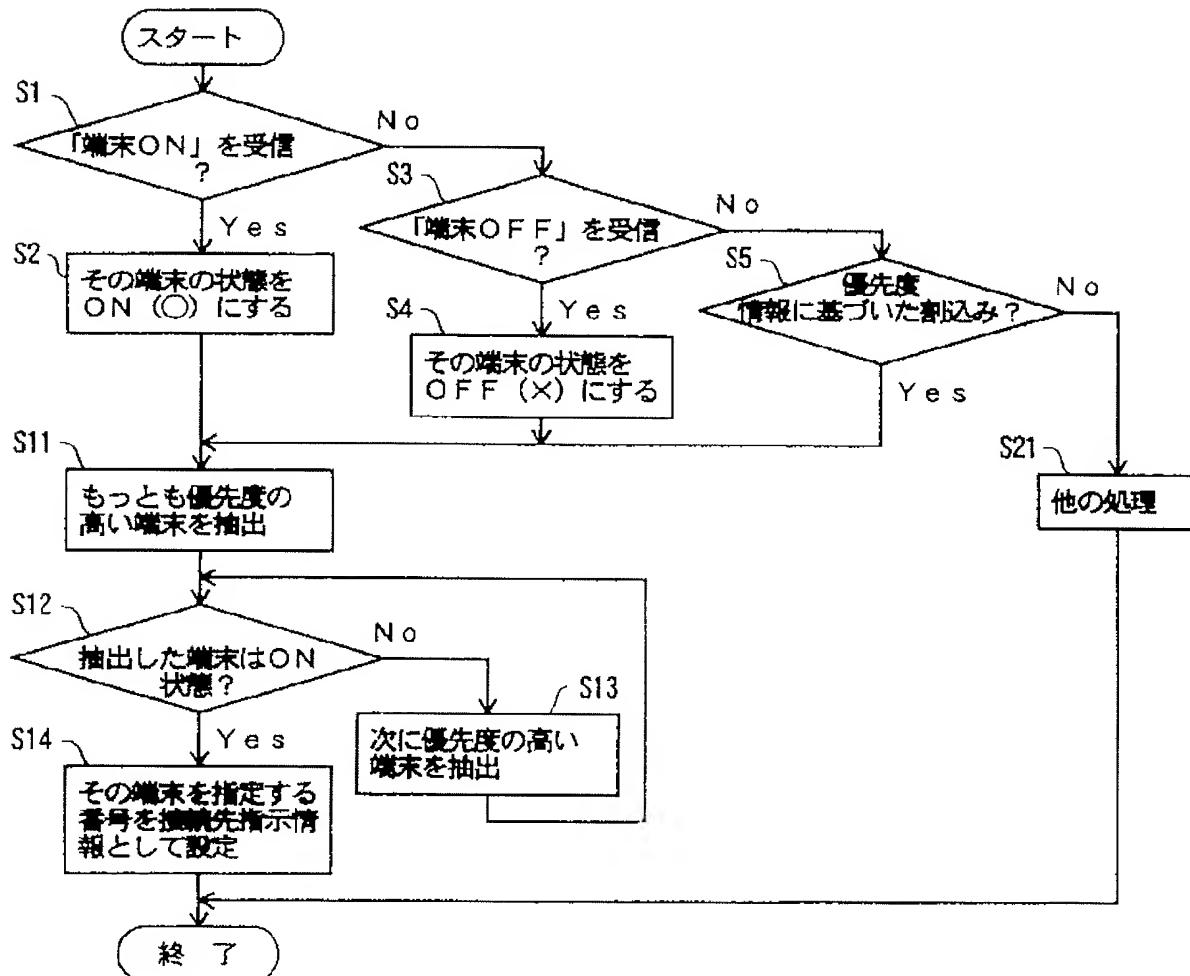
優先度情報の一例を示す図

氏　名	優　先　度　情　報
伊東□男 (A氏)	9:00〜17:00 1 →2 →3 ; 17:00 〜21:00 2 →1 →3 ; 21:00 〜9:00 3→1 →2
鈴木X郎	・・・・・・
高橋○子	・・・・・
・・・・	

Fig 4

- 15 -

発呼シーケンスを説明するフローチャート

```
        ┌──────────┐
        │  スタート  │
        └──────────┘
              │
        ┌──────────┐  S31
        │  発呼検出  │
        └──────────┘
              │
   No      ◇ S32
 ←───────自動ルーティングサービスの要求
          あり？
              │ Yes      S34
        ┌──────────────┐         ┌──────────┐
        │端末管理サーバに│         │  スタート  │
        │着信先の番号を転送│       └──────────┘
        │して処理を依頼  │              │
        └──────────────┘              │
   S33                                │         S41
 ┌──────────┐             ┌──────────────────┐
 │通常の呼処理│             │受信した番号を基に   │
 └──────────┘             │加入者テーブルを検   │
                          │索し、接続先指示情   │
                          │報を検出            │
                          └──────────────────┘
                                    │
                          ┌──────────────────┐
                          │接続先指示情報によ   │
                          │って指定される端末   │
                          │の番号を抽出して網   │
                          │へ返送する          │
                          └──────────────────┘
                                    │         S42
   S35                          ┌────────┐
 ┌──────────────┐              │  終  了  │
 │端末管理サーバから│            └────────┘
 │受信した番号に基づ│
 │いて呼を確立する  │
 └──────────────┘
              │
        ┌────────┐
        │  終  了  │
        └────────┘
```
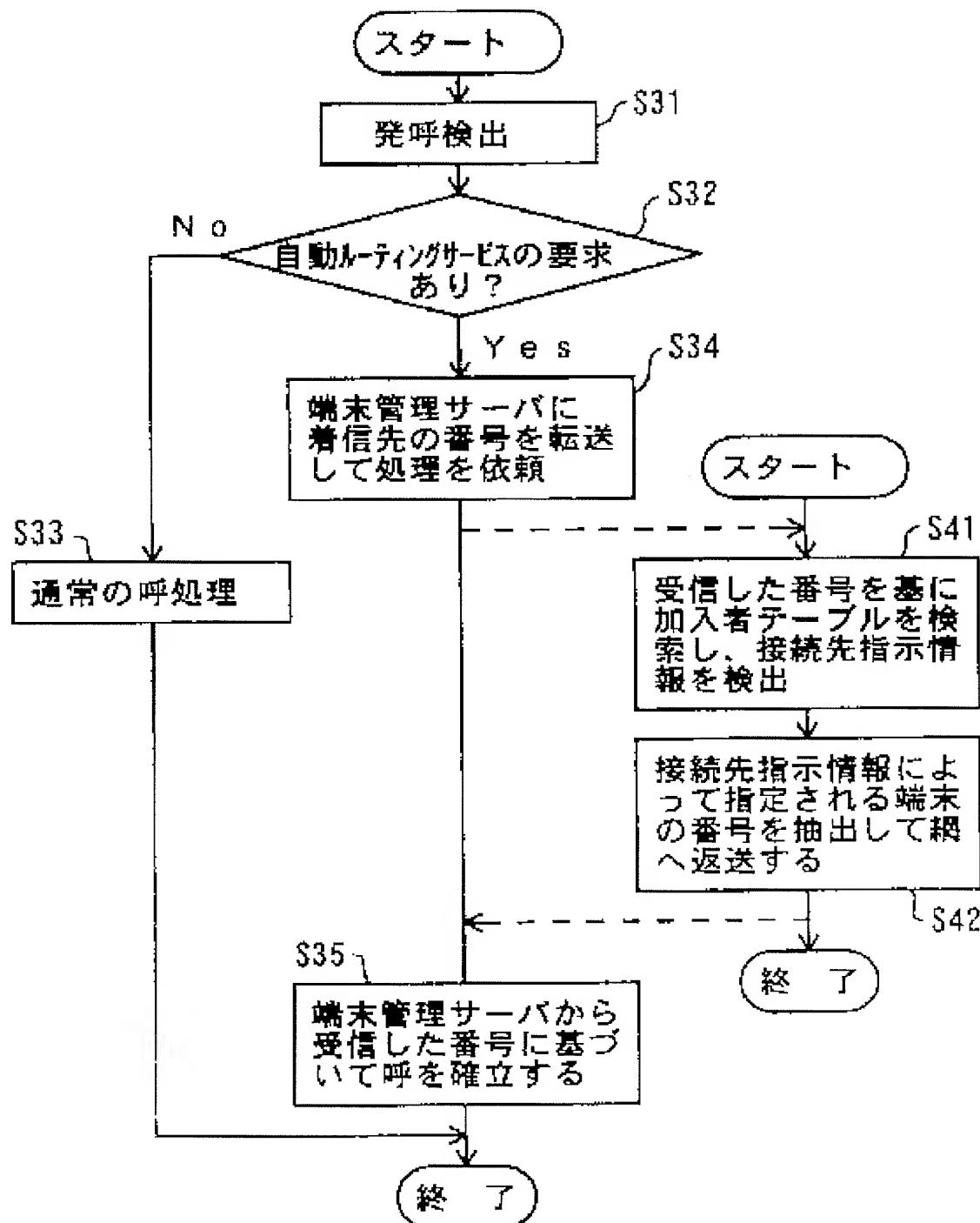
Fig 5

第2の実施形態の端末装置のブロック図

<u>10</u>

```
                        ┌──────────┐ 23
                        │   CPU    │
                        └────┬─────┘
                             │
 14 ┌──────────┐             │   ┌──────────┐ 15
    │  入力装置  │─────────────┼───│  表示装置  │
    └──────────┘             │   └──────────┘
                             │
 24 ┌──────────┐             │   ┌──────────┐ 26
    │   RAM    │─────────────┼───│ GPS装置  │
    └──────────┘             │   └──────────┘
                             │
 25 ┌──────────┐             │   ┌──────────┐ 21
    │   無線    │             │   │  記憶装置  │
    │ 通信装置  │─────────────┼───│          │
    └──────────┘             │   └──────────┘
                             │      ┆
 12 ┌──────┐  ┌──────────┐   │   ┌┄┄┄┄┄┄┄┄┄┐
    │スピーカ│──│   音声    │   │   ┆ 記憶媒体 ┆
    └──────┘  │ 入出力装置 │───┘   └┄┄┄┄┄┄┄┄┄┘ 22
 11 ┌──────┐  └──────────┘
    │マイクロホン│   13
    └──────┘
```

通信回線
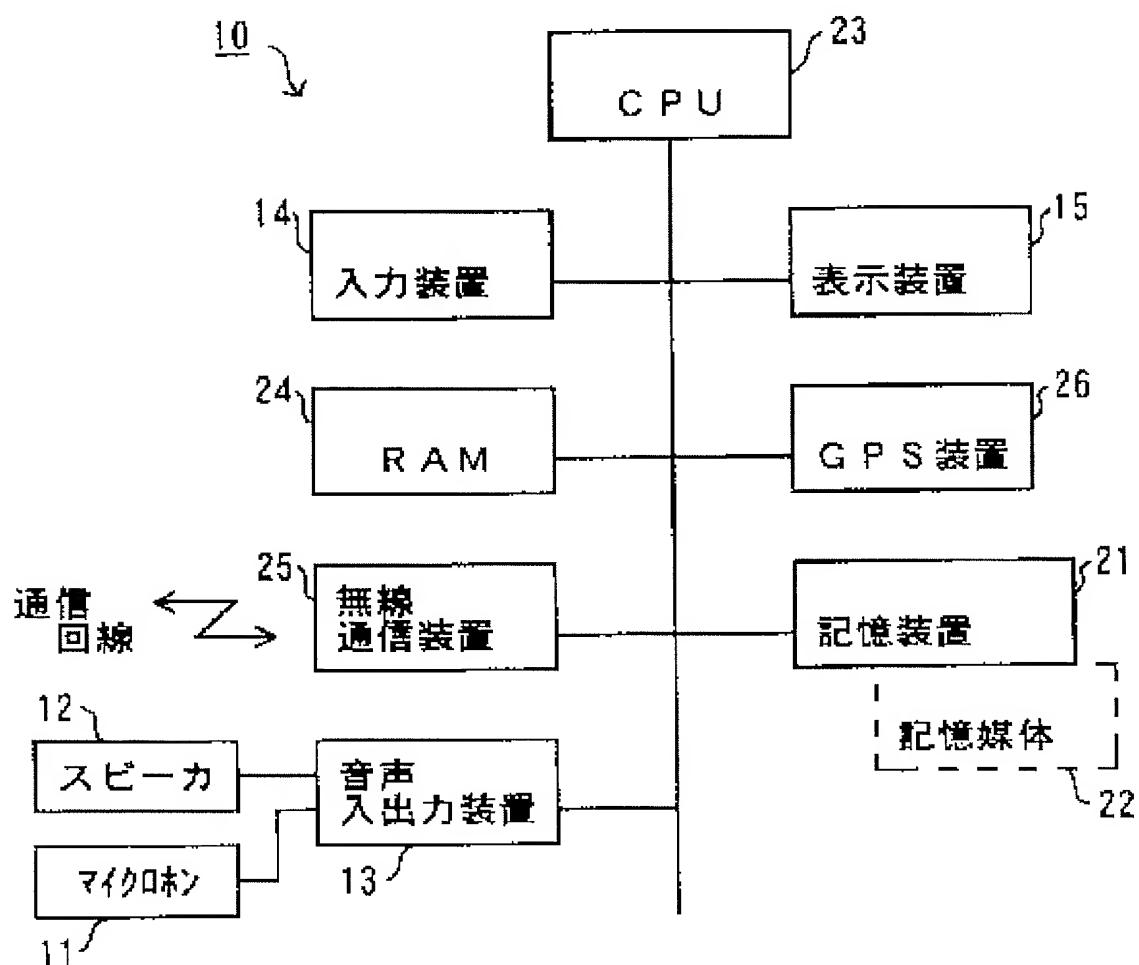
Fig 6

通信端末に登録される発信管理テーブルの一例の構成図

氏　名	接続先指示情報	第1の網の番号	第2の網の番号	第3の網の番号
伊東□男 （A氏）	1	050-456-1234	080-123-4567	050-5123-4567
高橋○子	3		080-321-7654	0425-44-1234

Fig 7

発信時の端末装置の処理を説明するフローチャート

```
                    ┌─────────────┐
                    │   スタート   │
                    └─────────────┘
                           │
S51                        ▼
      ┌──────────────────────────────────┐
      │            番号検出               │
      └──────────────────────────────────┘
                           │
S52                        ▼
      ┌──────────────────────────────────┐
      │  発信管理テーブルにおい           │
      │  て検出した番号をサーチ           │
      └──────────────────────────────────┘
                           │
S53                        ▼
             ◇ 発信管                              No
      ◇ 理テーブルに 上記番号は 登録 ◇──────────────┐
             ◇  されている ？ ◇                      │
                    │                                │
                    │ Yes                            │
S54                 ▼                                │
      ┌──────────────────────────┐                  │
      │  検出した番号に基づいて   │                  │
      │  通話予定者を特定         │                  │
      └──────────────────────────┘                  │
                    │                                │
S55                 ▼                                │
      ┌──────────────────────────┐                  │
      │  接続先指示情報によって   │                  │
      │  指定される端末の番号を   │                  │
      │  抽出                     │                  │
      └──────────────────────────┘                  │
                    │                                │
S56                 ▼                       S57      ▼
  ┌──────────────────────┐      ┌──────────────────────┐
  │  抽出された番号を用いて│      │  入力された番号を用いて│
  │  発呼                 │      │  発呼                 │
  └──────────────────────┘      └──────────────────────┘
                    │                       │
                    ▼◄──────────────────────┘
              ┌─────────────┐
              │   終  了     │
              └─────────────┘
```

Fig 8

- 19 -
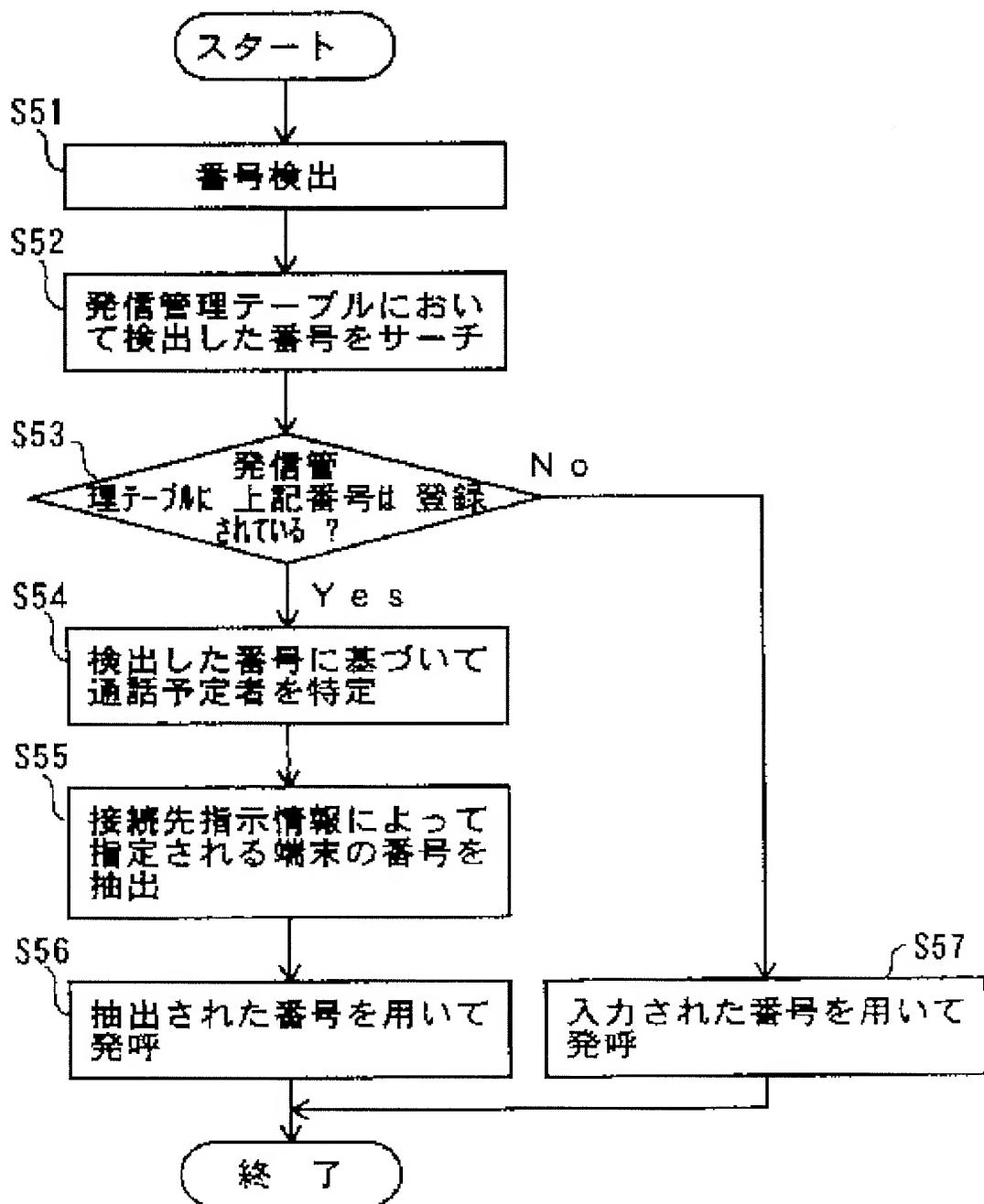
呼を確立できなかったときの再発呼処理のフローチャート

```
        ┌──────────────┐
        │    スタート    │
        └──────────────┘
                │
                ▼
S61  ┌────────────────────────┐
     │  発信管理テーブルから    │
     │  他の番号を選択          │
     └────────────────────────┘
                │
                ▼
S62  ┌────────────────────────┐
     │  選択した番号に基づいて  │
     │  接続先指示情報を更新    │
     └────────────────────────┘
                │
                ▼
S63  ┌────────────────────────┐
     │  選択した番号を用いて    │
     │  発呼                    │
     └────────────────────────┘
                │
                ▼
        ┌──────────────┐
        │    終  了     │
        └──────────────┘
```

Fig 9